

5

Claims

10 1. A coil system, adapted more especially for an
electrodynamic direct linear drive, comprising a coil
arrangement, which bears a plurality of individual coils
arranged coaxially in sequence, a board strip extending
along the coil arrangement, such board strip having an
electrical circuit with predetermined contact making
points, with which the wire ends of each individual coil
15 is electrically contacted with a simultaneous mechanical
attachment on the board strip.

20 2. The coil system as set forth in claim 1, wherein
the board strip is rigid or at least partly flexible in
structure.

25 3. The coil system as set forth in claim 1, wherein
the board strip possesses contact making holes arranged in
sequence in the longitudinal direction of the board strip,
which are placed in circuit by printed wiring on the board
strip in accordance with a predetermined circuit pattern
and into which the wire ends of the individual coils are
inserted and are soldered to the electrical circuit.

30 4. The coil system as set forth in claim 1, wherein
the circuit is so constituted that the individual coils
are connected together in a plurality of coil groups.

5. The coil system as set forth in claim 1, wherein

the board strip lies against an outer periphery of the coil arrangement.

5 6. The coil system as set forth in claim 1, comprising a magnetic return part coaxial to the coil arrangement which possesses a longitudinally extending recess in which the board strip extends.

10 7. The coil system as set forth in claim 6, wherein the magnetic return part is a tubular body surrounding the coil arrangement, such body being longitudinally slotted to form the recess.

15 8. The coil system as set forth in claim 6, wherein the intermediate spaces between the magnetic return part, the individual coils and the board strip are filled with a potting composition.

20 9. The coil system as set forth in claim 1, wherein the individual coils are coils with bonding enamel.

25 10. The coil system as set forth in claim 1, wherein the individual coils are centered on an electrically non-conductive tube extending through the coil arrangement.

 11. The coil system as set forth in claim 1, wherein the individual coils are identical with each other.

30 12. The coil system as set forth in claim 1, wherein axially adjacent individual coils at least in part touch one another.

35 13. A method for the manufacture of a coil system, more especially for an electrodynamic direct linear drive, which comprises a coil arrangement having a plurality of

coaxially sequentially arranged individual coils, and prefabricated individual coils are so secured in position with their wire ends with the simultaneous making of contact on a board strip bearing an electrical circuit that the board strip extends along the coil arrangement.

14. An electrodynamic direct linear drive comprising a first component in the form of a stator and a second component in the form of an output drive part able to be moved linearly in relation to the stator, one of the components being fitted with a coil system designed as set forth in claim 1 and the other component being fitted with a magnet system comprises one or more axially sequentially placed permanent magnets.

15. An electrodynamic direct linear drive comprising a first component in the form of a stator and a second component in the form of an output drive part able to be moved linearly in relation to the stator, one of the components being fitted with a coil system produced as set forth in claim 13 and the other component being fitted with a magnet system comprises one or more axially sequentially placed permanent magnets.

16. An electrodynamic direct linear drive as set forth in claim 14, wherein the magnet system and the coil system are placed coaxially one within the other.